CLAIMS

1. A method of testing a telecommunications system, the method comprising;

1) applying a first AC test signal having a first signal frequency to the system and measuring the response of the system to the first test signal;

2) applying a second AC test signal having a second signal frequency different to the first signal frequency to the system and measuring the response of the system to the second test signal; and

3) calculating one or more parameters of the system from the responses measured in steps 1) and 2).

2. A method according to claim 1 wherein the first and second test signals are applied at different times.

3. A method according to claim 1 wherein one or both of the test signals has a substantially sinusoidal waveform.

4. A method according to claim 1 wherein less than five cycles of each signal is applied to the system.

5. A method according to claim 1 wherein the test signals are each applied to the system through a known impedance.

6. A method according to claim 1 further comprising applying;

4) applying one or more additional test signals to the system and measuring the response of the system to at least one test signal; and

wherein step 3) comprises calculating one or more parameters of the system from the responses measured in steps 1),2) and 4).

7. A method according to claim 1 wherein the system comprises first and second transmission lines, and wherein each step of applying a test signal and measuring the response of the system comprises

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a) applying the test signal to the first line and monitoring the response of the first line and the second line to the test signal; and

b) applying the test signal to the second line and monitoring the response of the second line and the first line to the second test signal.

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8. A method of testing a telecommunications system comprising first and second transmission lines, the method comprising

1) applying a first test signal to the first line and measuring the response of the first line and the second line to the first test signal;

2) applying a second test signal to the second line and measuring the response of the second line and the first line to the second test signal; and

3) calculating one or more parameters of the telecommunications system from the responses measured in steps 1) and 2).

9. A method according to claim 8 wherein the first and second signals each comprise AC signals.

10. A method according to claim 9 wherein the signal frequencies of the first and second test signals are substantially identical.

11. A method according to claim 10 wherein the first and second test signals have a known phase relationship.

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12. Apparatus for testing a telecommunications system, the apparatus comprising;

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1) means for applying a first AC test signal having a first signal frequency to the system;

2) means for measuring the response of the system to the first test signal;

3) means for applying a second AC test signal having a second signal frequency different to the first signal frequency to the system;

4) means for measuring the response of the system to the second test signal; and

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5) means for calculating one or more parameters of the system from the responses measured in steps 1) and 2).

13. Apparatus for testing a telecommunications system comprising first and second transmission lines, the apparatus comprising

1) means for applying a first test signal to the first line

2) means for measuring the response of the first line and the second line to the first test signal;

3) means for applying a second test signal to the second line;

4) means for measuring the response of the second line and the first line to the second test signal; and

5) means for calculating one or more parameters of the telecommunications system from the responses measured in steps 1) and 2).